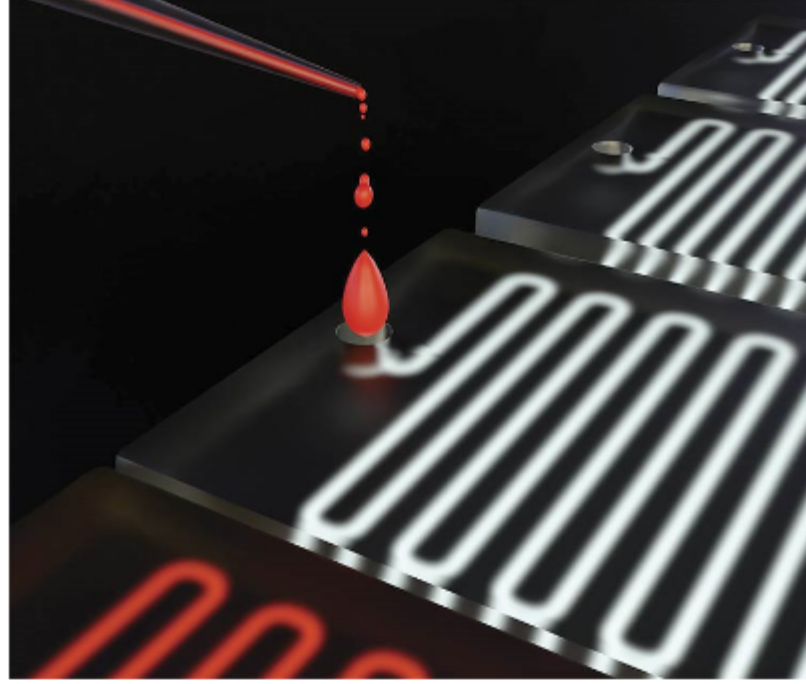




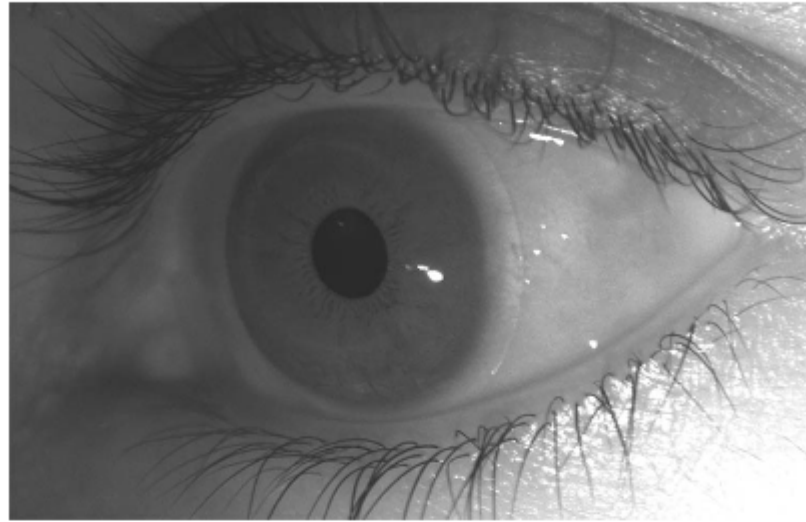
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Fluorescence Microscopy and Microfluidics Intersect for Biological Discovery

Microfluidics has transformed from a niche technology into a fundamental tool for biological experimentation during the last decade. When coupled with wide-field fluorescence microscopy, it enables the observation of biological systems at both the cellular and population levels, and at the same time offers precise control over experimental conditions. Yet despite its potential, microfluidics remains underutilized in certain areas of research, primarily due to the complexity of integrating disparate components such as pumps, incubators,

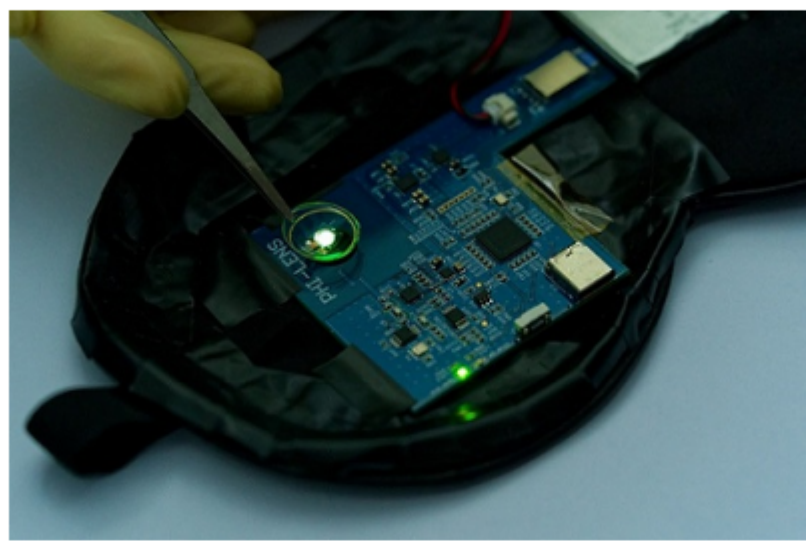
and imaging systems, each with its own control software and protocols. [Read Article](#)



Foveation and Spectral Imaging: Nature-Inspired Data Reduction for Efficient Devices

Hyperspectral imaging holds great promise for medicine as it matures into a practical technology. The fusion of imaging methods that spatially resolve light energy passing through an opening with methods that spectrally resolve the light can augment human perception — such as that of a doctor

performing a diagnosis — by orders of magnitude. But HSI of sufficient resolution and bandwidth also increases data generation, transmission, processing, and storage requirements by orders of magnitude. Each bit operation consumes energy and generates heat, which directly affects the size, weight, and power requirements of devices based on HSI. [Read Article](#)



OLED Contact Lenses Expand Options for Diagnostics and Treatment

A wireless contact lens that integrates OLED technology into ophthalmic diagnostics could transform the way in which ocular health is monitored, benefiting both patients and practitioners. The lens is the result of a collaboration among the Korea Advanced Institute of Science and Technology, the Electronics and Telecommunications Research Institute (ETRI), and the Seoul National University Bundang Hospital.

To create the wearable light source, the team led by professor Seunghyup Yoo designed a configuration and process flow that integrated an ultrathin OLED, an antenna, and a controller chip for wireless power reception with a contact lens.

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More News

Exosens Continues Growth with Phasics Acquisition

Imaging and detection solutions developer Exosens will acquire wavefront sensing technology company Phasics. The deal expands Exosens' portfolio of offerings targeting defense, industrial control, and the life sciences. Financial terms of the purchase were not disclosed. [Read Article](#)

Breath-Activated Sensor for Diagnosing Diabetes

Due to a recent breakthrough, diabetes diagnosis will skip the lengthy lab work and doctor's visits with a simple breath test. Researchers at Penn State University developed a sensor that can diagnose diabetes and prediabetes in a few minutes using a breath test. Diabetes testing typically tests glucose found in blood or sweat; however, this non-invasive test uses a sensor to detect acetone levels in breath. While acetone in breath is normal, an acetone level of 1.8 parts per million is [Read Article](#)

Agate Sensors Raises \$6.6M for Everyday Spectroscopy Tech

Agate Sensors, a spinout of Aalto University developing smart sensors for material analysis, has raised €5.6 million (~\$6.6 million) to commercialize a research breakthrough that shrinks spectroscopy from suitcase-sized lab equipment to a single pixel smaller than a grain of sand — integrated into a chip compact enough to sit on the tip of a finger. [Read Article](#)

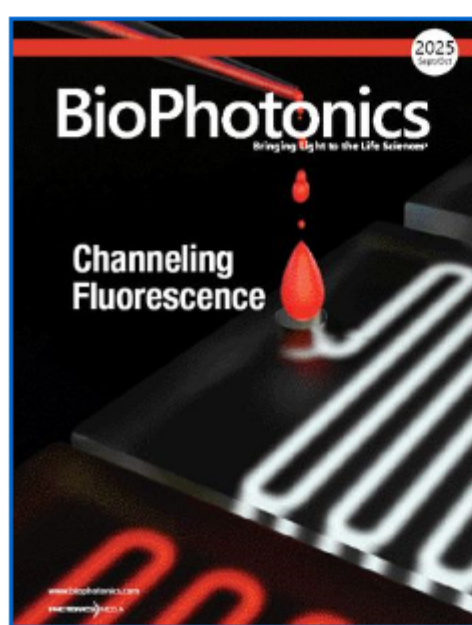
Next Issue

Features

Multiphoton Microscopy & Neurology, NIR Spectroscopy & Neurology, Fluorescence Lifetime Imaging & Neurology

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